

DIESEL SIP WORKGROUP
SUMMARY OF CONTROL MEASURES DISCUSSED on 9/26/05
NONROAD STRATEGIES (not including ports and rail)

Criteria for evaluating each measure:

Environmental Benefits
 Technical Feasibility
 Economic Feasibility
 Implementation Feasibility
 Societal Benefits/Env Justice
 Enforceability

DESCRIPTION OF CONTROL MEASURE	PROS	CONS
***Provide incentives for alternative fuel use	Simple to implement. Reduction of 13% PM compared to off-road (3000 ppm) fuel, without any retrofit or engine modification needed.	May not get large participation if voluntary. Ultra low sulfur diesel already required by diesel legislation. Until ULSD becomes widely available in the fall of 2006, there may be fuel delivery problems due to limited purveyors of ULSD. Increased cost (~10-15 cents/gallon).
**Oxygenated diesel/biodiesel/ediesel	Federal tax credit may spur use; easy to implement; PM reduction; renewable sources.	Higher cost than diesel. May not get large participation if voluntary. E-diesel and biodiesel infrastructure is mostly limited to midwest due to proximity of the crop source (Corn and soybeans)
***Retrofits (DOCs, DPFs) on offroad equipment	Proven technology, generally available, known reductions in PM and Nox	Must use ULSD, exhaust gas temperature and duty cycle limits use of some technologies.
***Mandatory contract provision or contract preference for retrofits	Depending on where applied, use of mandatory contract is within state control, could be technology forcing. Even playing field if everyone required to retrofit.	Preference concept hurts low bid process
***Idling reduction: outreach and education to reduce time spent idling	Extremely high idle rates for offroad equipment. Outreach is inexpensive	Difficult to change old habits, need buy-in from construction companies
***Install idle reduction technology on offroad equipment	Already implemented on new on-road and off road port equipment. Readily available technology. PM reduction, fuel savings, possible engine wear savings.	Cost of retrofits may be high, but can require only on new equipment. Many engines may still employ glow-plug technology thus causing engine startup problems. Engines on some construction equipment also power electric generators therefore idling reduction may not be an option. After job is finished, may need to idle to allow engine to cool down.
**Incentives to replace old engines with less	Could be used for agriculture with emission	Must find funding source to offset the

polluting ones/scrappage program	and economic benefit to farmers. Good business case (improved efficiency). Fuel savings due to newer, more fuel efficient engines.	replacement or repower costs. (new grant money in federal energy bill?)
**Electrification of equipment	Demonstrated by cranes at NY/NJ port. Some applications would have direct health benefits (carnivals). Noise reduction. Fuel savings.	Cannot be used where no power at site or too expensive to run power lines.
*Halt construction on ozone action days (call it weather delay)	Targeted benefit when needed most.	Expensive for construction industry (who will pay?); delays may increase project cost.

*Less promising strategy

**Promising strategy

*** Most promising strategy